

Meeting Regulations

Before reaching that determination, DOE had to show that the repository would comply with federal Environmental Protection Agency (EPA) regulations, which are meant to ensure the lowest reasonable risk to members of the Nevada public.

If radionuclides were to become mobile because, for example, water had infiltrated the repository and gained access to and dissolved some of the waste, some radionuclides might be transported through the mountain's rock layers and down to the water table, where they could flow underground into the bordering Amargosa Desert. Future residents might then pump the tainted water to the surface.

Given that possibility, the EPA considered a person living a certain distance from the repository, eating some locally grown food, and drinking the local water. The repository could not be built if that person might potentially receive more than a small dose of radiation in addition to doses normally received from naturally occurring "background" sources. Radiation is everywhere, and across the nation, Americans receive an average dose of 360 millirem per year because of background, evidently with no harm.

In 2008, the EPA stipulated that for the first 10,000 years following the repository's closure, a potential leak must not cause an additional dose greater than 15 millirem per year, a small fraction of the background value. Furthermore, the EPA specified that the additional dose could be no more than 100 millirem per year over a million years.